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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/089,861

08/08/2002

Paris Tsangaris

328 P 653

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4743

7590

08/18/2006

EXAMINER

LE, HUYEN D

MARSHALL, GERSTEIN & BORUN LLP

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SEARS TOWER

CHICAGO, IL 60606

ART UNIT

PAPER NUMBER

2615

DATE MAILED: 08/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/089,861

Applicant(s)

TSANGARIS ET AL.

Examiner

HUYEN D. LE

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 39-72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 39,40,42,43,47,50,56,57,59,60,64 and 67 is/are rejected.
- 7) ☒ Claim(s) 41,44-46,48,49,51-55,58,61-63,65,66 and 68-72 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/1/02</u> _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 39-40, 42, 56, 57, 66 and 68 are objected to as presented inconsistency:

In claim 39, line 8, after “nominal”, “tunnel” should be changed to --rib--, and line 10, “read” should be changed to --reed--;

In claim 40, line 2, before “nominal”, “a” should be changed to --the--;

In claim 42, line 2, before “nominal”, “a” should be changed to --the--;

In claim 56, line 8, after “nominal”, “tunnel” should be changed to --rib--, and line 10, “read” should be changed to --reed--;

In claim 57, line 2, before “nominal”, “a” should be changed to --the--;

In claim 66, line 2, before “nominal”, “a” should be changed to --the--; and

In claim 68, line 2, before “nominal”, “a” should be changed to --the--.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 50 and 67 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 2615

In claim 50, it is not clear how the second tapered portion comprises each of the first portion and second portion since the tapered portion or first tapered portion in claim 38 comprises either the first portion or the second portion.

In claim 67, it is not clear how the second tapered portion comprises each of the first portion and second portion since the tapered portion or first tapered portion in claim 56 comprises either the first portion or the second portion.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 39, 40, 42, 43, 47, 56, 57, 59, 60 and 64 are rejected under 35 U.S.C. 102(b) as being anticipated by Salvage et al. (U.S. patent 5,647,013).

Regarding claims 39, 43 and 47, Salvage teaches a transducer that comprises a pair of space magnets (13, 14) forming a first passage, a coil (12) being formed a second passage. As shown in the drawings, the first passage and second passage respectively form a first portion and a second portion of a tunnel (18) that has a central axis, first and second side walls, a nominal tunnel width, first and second upper walls and a nominal rib gap as claimed.

Salvage further shows a reed armature (17) that has a stationary end and a deflection end. As shown in figures 1-3, the reed (17) has a tip portion that at least partially within the first

Art Unit: 2615

passage, the coil (12) has a first end disposed toward the stationary end and a second end disposed adjacent the magnets (13, 14), and the magnets have a first end and a second end as claimed. Further, as shown in figures 10-12, the tunnel has a tapered portion that increases or decreases the nominal rib gap as claimed.

Regarding claim 40, as shown from figures 10-11, the tapered portion provides the nominal rib gap that gradually decreases.

Regarding claim 42, as shown from figures 10-11, the tapered portion provides the nominal rib gap that gradually increases.

Regarding claims 56, 60 and 64, Salvage teaches a transducer that comprises a pair of space magnets (13, 14) forming a first passage, a coil (12) being formed a second passage. As shown in the drawings, the first passage and second passage respectively form a first portion and a second portion of a tunnel (18) that has a central axis, first and second side walls, a nominal tunnel width, first and second upper walls and a nominal rib gap as claimed.

Salvage further shows a reed armature (17) that has a stationary end and a deflection end. As shown in figures 1-3, the reed (17) has a tip portion that at least partially within the first passage, the coil (12) has a first end disposed toward the stationary end and a second end disposed adjacent the magnets (13, 14), and the magnets have a first end and a second end as claimed. Further, as shown in figures 11-12, the tunnel has a tapered portion that increases or decreases the nominal tunnel width as claimed.

Regarding claim 57, as shown from figures 11-12, the tapered portion provides the nominal tunnel width that gradually decreases.

Art Unit: 2615

Regarding claim 59, as shown from figures 11-12, the tapered portion provides the nominal tunnel width that gradually increases.

***Allowable Subject Matter***

5. Claims 41, 44-46, 48, 49, 51-55, 58, 61-63, 65-66 and 68-72 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 50 and 67 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tibbetts (U.S. patent 3,531,745) teaches a magnetic translating device with armature flux adjustment means.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUYEN D. LE whose telephone number is (571) 272-7502. The examiner can normally be reached on 9:30AM-6:00PM.

Art Unit: 2615

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SINH TRAN can be reached on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



HL  
August 4, 2006



**HUYEN LE**  
**PRIMARY EXAMINER**